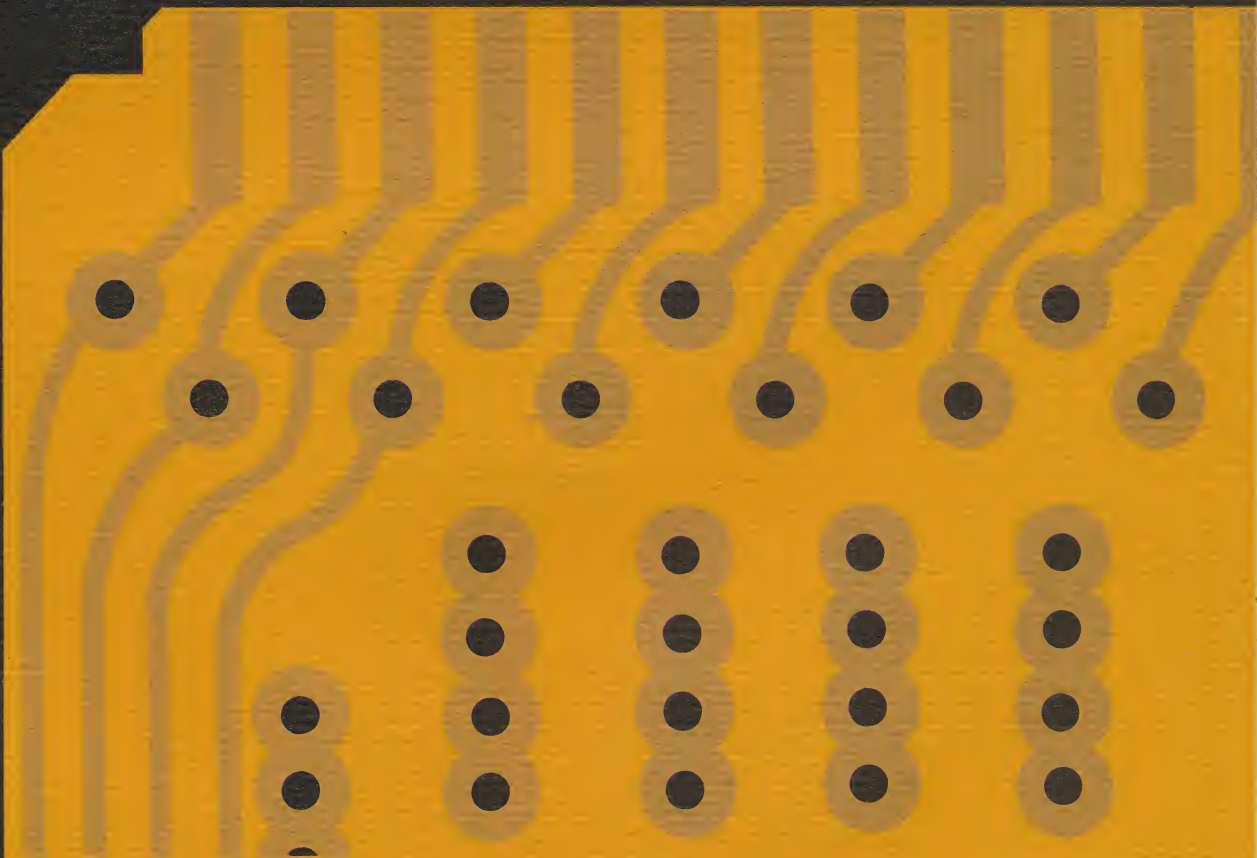


PRINTED CIRCUITS

for prototypes



DOUGLAS ELECTRONICS

1429 Oregon Street—Berkeley 2, California

THornwall 1-6439

DOUGLAS ELECTRONICS

1429 OREGON STREET - BERKELEY 2, CALIFORNIA - THORNWALL 1-6439

INDUSTRIAL PRINTED CIRCUIT SPECIFICATIONS

Donuts and hole drilling

The interior holes of circuit lands or donuts are used as pilot holes for drilling. They must be $1/32$ inch in diameter.

The outer diameter of donuts must be at least $3/32$ inch.

No drilled hole will break the outer edge of its locating donut if the following rule is observed in preparing the art work. The radius of the drill to be used must not exceed 45 percent of the smallest radial distance from the center of the donut to its outer edge.

We suggest the following rules to simplify drilling instructions. These rules will be followed unless we are instructed otherwise.

$3/32$ donuts will be drilled # 63

$1/8$ donuts will be drilled # 56

$5/32$ donuts will be drilled #51 and eyelets installed.

Donuts of other sizes will be drilled with a # 56 pilot hole unless other instructions are given.

Conductor Pattern Quality

Minimum conductor width is .040 inches. We recommend .050 where possible.

Minimum conductor separation is .040 inches between parallel lines and .025 inches at points.

There will be no open conductors. There will be no irregularities in conductor width due to nicks scratches, bumps, etc which exceed 50 percent of the normal conductor width.

There will be no shorts between adjacent conductors.

Take care to make printing bold enough. Lines should be .025 in or heavier.

Conductors should not be placed closer than $1/16$ inch to the edge of the board. Ends of edge connector fingers should be .020 in back from the edge of the board. This makes the board easy to plug into the connector.

If you use ADC hardware don't forget to leave space for the handle.

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INDUSTRIAL PRINTED CIRCUIT SPECIFICATIONS

To expedite your order or inquiry please fill out this sheet and return to us.

Customer's name

Inquiry or order number if any

Date

MATERIAL

- ☐ A Flame retarded paper epoxy FR-3
☐ * B Other _____

THICKNESS

- ☐ A 1/16 inch
☐ * B Other _____

COPPER THICKNESS

- ☐ A 2 oz. per sq. ft.
☐ B 1 oz. per sq. ft.

COPPER

- ☐ A 2 sides
☐ B 1 side

FINISH

- ☐ A .00002 gold over .0005 inch nickel
☐ * B Other _____

OUTLINE

- ☐ A To our standard DE-1
☐ B Other outline which can be made by cutting down outline DE-1
Show outline marks on artwork. Tolerance will be $\pm 1/32$ unless specified.
☐ * C Other than A or B. Provide drawing.

HOLE SHAPES

- ☐ A Round
☐ * B Other

HOLE COUNT

- ☐ A 200 or less
☐ * B More than 200

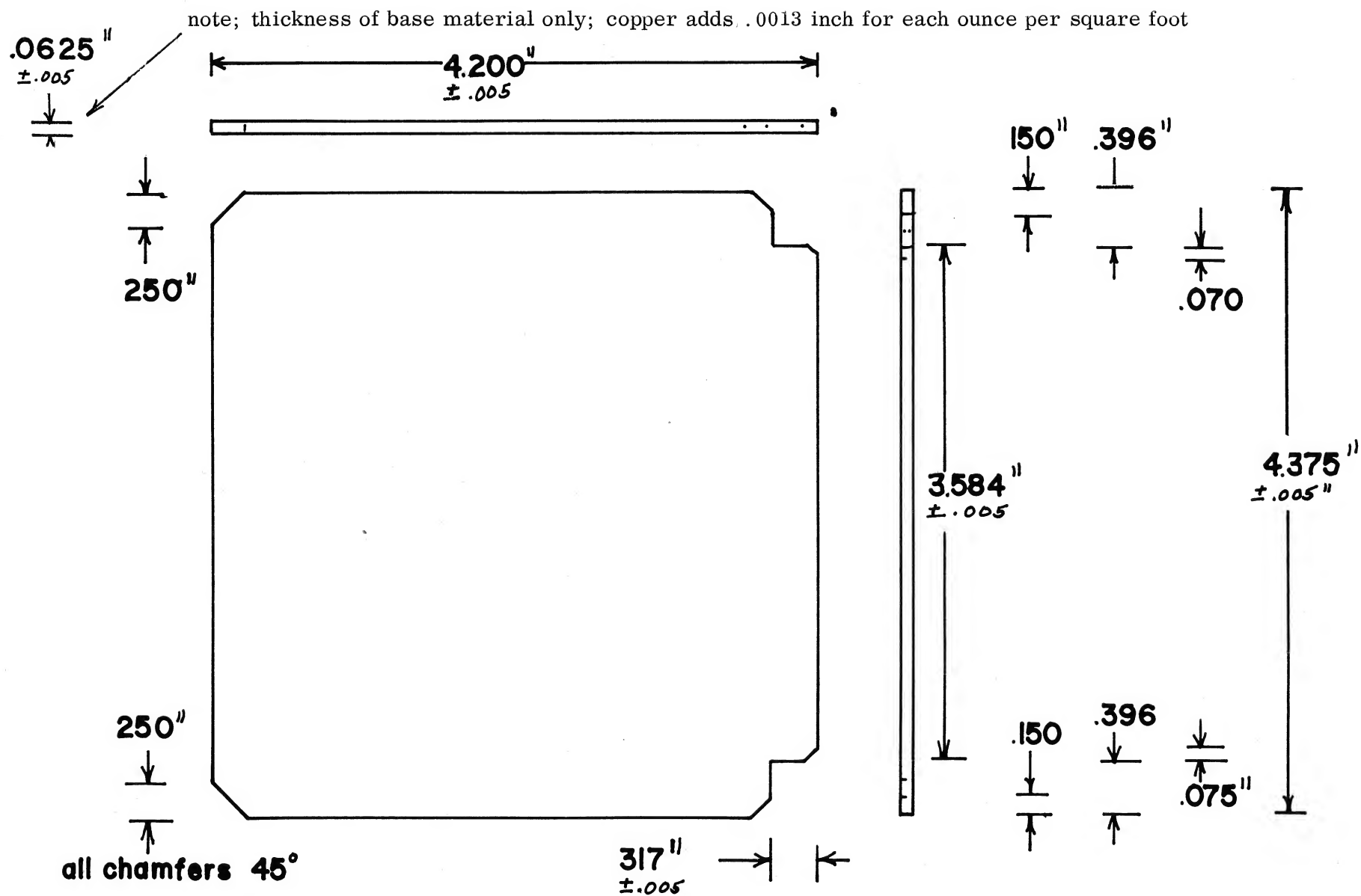
FEEDTHROUGHS

- ☐ A Funnel flange eyelet S5867; requires #52 hole
☐ * B Other-- _____

EYELET COUNT

- ☐ A 30 or less
☐ * B More than 30

* denotes exception to our regular price or delivery schedule



DOUGLAS ELECTRONICS STANDARD PRINTED CIRCUIT BOARD BLANK TYPE DE-1 OUTLINE DRAWING

BREADBOARD TYPE 4-DE-1

General Information

Four of the 22 edge connector fingers connect to busses down the center of the board. These are for power supplies or common connections.

Printed pattern accommodates 12 transistors, and plenty of associated parts. There are over 450 holes.

Each transistor lead is provided with terminals toward the center of the board. These are to be used for load resistors, bias resistors, clamps and other parts which connect to power supply or common points.

Each transistor lead is also provided with terminals away from the center of the board. These can be used for parts which connect to other transistor leads such as coupling capacitors, gate diodes, etc. This arrangement allows adjacent parts to lie parallel to one another with a minimum of leads running at odd angles.

The eyelets at the connector fingers should be soldered as they are used. They give the added reliability of parallel redundant contacts through the 22 pin edge connector.

The printed contact finger pattern mates with the industry standard 22 pin edge connector. These are available from most of the major connector manufacturers.

The board is manufactured on the Douglas DE-1 outline shape. Mounting hardware to fit it is readily available from Allied Development Corporation, 1131 Monterey Pass Road, Monterey Park, California.

Dimensions:	4.375" x 4.200" x 1/16" thick
Base material:	Paper epoxy
Copper:	2-oz. both sides
Finish:	Gold over nickel
Availability:	In stock
Price:	\$3.50 each

These breadboards should be ordered from us as —
BREADBOARD TYPE 4-DE-1.

They are priced at \$3.50 each and are kept in stock at all times.

Other general purpose boards which we keep in stock are an 8 by 10 diode matrix board, MATRIX TYPE 5-DE-1, price \$2.50, and an extender board for the 22 pin edge connector, EXTENDER TYPE 6-DE-1, price \$2.50.

